REMARKS

This communication responds to the Office Action mailed on <u>December 12, 2006</u>.
Claims 1, 11-22, 24, 30, 34, 39, 48-50, 52, and 54-56 are amended, and claims 5, 10, 38, and 43
are canceled; as a result, claims 1-4, 6-9, 11-37, 39-42, and 44-56 are now pending in this
application. Claims 11-18, 21, 24, 30, 39, 48-50, 52, and 54-56 have been amended to correct
typographical errors, or to match language introduced into independent claims, and not for
reasons related to patentability.

§101 Rejection of the Claims

Claims 22-27 were rejected under 35 U.S.C. § 101 because the claimed invention was
stated to be directed to non-statutory subject matter. As suggested by Examiner, Applicant has
amended claim 22 to clarify that the system is a computer-implemented system including a
memory. Applicant respectfully submits that the claims are directed to statutory subject matter.
Claims 23-27 depend either directly or indirectly from claim 22. These dependent claims inherit
the elements of their respective base claim, and are therefore allowable for the same reasons as
discussed above with respect to base claim 22. Applicant therefore respectfully requests
reconsideration and the withdrawal of the rejection of claims 22-27.

§103 Rejection of the Claims

Claims 1-4, 5-9, 11-37, 39-42, and 44-56 were rejected under 35 U.S.C. § 103(a) as being
unpatentable over Tijare et al. (U.S. 6,950,815; hereinafter "Tijare") in view of Lipkin et al.
(U.S. Publication 2005/0154699; hereinafter "Lipkin"). First, the Applicant does not admit that
Tijare or Lipkin are prior art, and reserves the right to swear behind these references in the
future. Second, since a *prima facie* case of obviousness has not been established in each case,
the Applicant respectfully traverses these rejections.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of
obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988).
In combining prior art references to construct a *prima facie* case, the Examiner must show some
objective teaching in the prior art or some knowledge generally available to one of ordinary skill

in the art that would lead an individual to combine the relevant teaching of the references. *Id.*

The M.P.E.P. contains explicit direction to the Examiner that agrees with the *In re Fine* court:

> In order for the Examiner to establish a *prima facie* case of obviousness, three
> base criteria must be met. First, there must be some suggestion or motivation,
> either in the references themselves or in the knowledge generally available to one
> of ordinary skill in the art, to modify the reference or to combine reference
> teachings. Second, there must be a reasonable expectation of success. Finally,
> the prior art reference (or references when combined) must teach or suggest all
> the claim limitations. The teaching or suggestion to make the claimed
> combination and the reasonable expectation of success must both be found in the
> prior art, and not based on Appellant's disclosure. *M.P.E.P.* § 2142 (citing *In re
> Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

An invention can be obvious even though the suggestion to combine prior art teachings is

not found in a specific reference. *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d (BNA) 1443

(Fed. Cir. 1992). However, while it is not necessary that the cited references or prior art

specifically suggest making the combination, there must be some teaching somewhere which

provides the suggestion or motivation to combine prior art teachings and applies that

combination to solve the same or similar problem which the claimed invention addresses. One

of ordinary skill in the art will be presumed to know of any such teaching. (See, e.g., *In re

Nilssen*, 851 F.2d 1401, 1403, 7 U.S.P.Q.2d 1500, 1502 (Fed. Cir. 1988) and *In re Wood*, 599

F.2d 1032, 1037, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)). The requirement of a suggestion or

motivation to combine references in a *prima facie* case of obviousness is emphasized in the

Federal Circuit opinion, *In re Sang Su Lee*, 277 F.3d 1338; 61 U.S.P.Q.2D 1430 (Fed. Cir. 2002),

which notes that the motivation must be supported by evidence in the record.

No proper *prima facie* case of obviousness has been established because (1) combining

the references does not teach all of the limitations set forth in the claims, (2) there is no

motivation to combine the references, and (3) combining the references provides no reasonable

expectation of success. Each of these points will be explained in detail, as follows.

Combining the References Does Not Teach All Limitations: Claim 1 as currently

presented recites "reading metadata for a database, the metadata including a constraint definition

for at least one column of the database", and "translating the metadata into a page definition

language, the page definition language including a translation in accordance with the constraint

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definition." Claims 19, 20, 22, 28, and 34 as presented recite similar language. Applicant has reviewed Tijare and can find no teaching or disclosure of "reading metadata for a database, the metadata including a constraint definition for at least one column of the database" and "translating the metadata into a page definition language, the page definition language including a translation in accordance with the constraint definition." The Office admits with respect to independent claim 1, "... the reference fails to explicitly state that metadata including a constraint definition for at least one column." The Office goes on to assert that "Lipkin provides constraint definitions that allow a user to read specific metadata based upon specific values."

Claims during examination should be interpreted as broadly as their terms reasonably allow, however, that interpretation must be tempered by the context in which the terms are used. The *Hyatt* court states that "during examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 U.S.P.Q.2D (BNA) 1664, 1667 (Fed. Cir. 2000) (emphasis added) ("During examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification."; citing *In re Graves*, 69 F.3d 1147, 1152, 36 U.S.P.Q.2D (BNA) 1697, 1701 (Fed. Cir. 1995); *In re Etter*, 756 F.2d 852, 858, 225 U.S.P.Q. (BNA) 1, 5 (Fed. Cir. 1985) (en banc)).

The interpretation of the limitation "metadata including a constraint definition for at least one column" tendered by the Office is neither reasonable nor consistent with the specification. It is not reasonable because it does not encompass the meaning of the term as understood by those of ordinary skill in the art. Lipkin teaches "DataDictionary Manager – Manage metadata about business objects. This metadata is used to generate user interface, specify constraints..." (See, Lipkin, paragraph 0082). In contrast, Applicant's specification discloses "exemplary metadata includes table definitions for a customer table 202 and a state table 204, and an integrity constraint 210 (See specification, page 7, line 21-22).

The interpretation of "metadata including a constraint definition for at least one column" tendered by the Office is also not consistent with the specification which recites, "the constraint knowledge in the metadata." (See, specification, page 9, line 23) and "constraints placed on the data ... provide validation rules for the data" (See, specification, page 5, lines 21-22). On the contrary, Lipkin teaches "DataDictionary Manager – Manage metadata about business objects. This metadata is used to generate user interface, specify constraints..." (See, Lipkin, paragraph

0082). Additionally, Lipkin uses the term "constraints" in other contexts which are not related to solving the problem expressed by the Applicant. For example, Lipkin states, "The algorithm for save is then as follows: ... Check each of the attributes against the rules set for its nullity, constraints. If any of the constraints are violated, throw an error." (See Lipkin, paragraphs 0254, 0262). Other examples include, "SabaPlatformObject implements a set of methods for getting and setting attribute values ... auditing and constraint checking, and are used by subclass of SabaPlatformObject." (See Lipkin, paragraph 0348); "A developer must implement these methods ... to take advantage of services like constraint checking and auditing." (See Lipkin, paragraph 0358); "The other three times of relationships entail constraints between the classes being related." (See Lipkin, paragraph 0366); "The SabaRelationship class will ensure that referential integrity constraints are being satisfied." (See Lipkin, paragraph 0367); At present, Enterprise Java Beans (EJB) Specification does not provide a mechanism for declaring such constraints ..." (See Lipkin, paragraph 0426).

Thus, Lipkin does not teach "reading metadata for a database, metadata including a constraint definition for at least one column", as claimed by the Applicant. Additionally, Lipkin does not teach "translating the metadata into a page definition language including a translation in accordance with the constraint definition" as claimed by the Applicant. Therefore, no combination of Tijare and Lipkin serve to teach the limitations of "reading metadata for a database, metadata including a constraint definition for at least one column" and "translating the metadata into a page definition language including a translation in accordance with the constraint definition" as recited by the Applicant in independent claims 1, 19, 20, 22, 28, and 34.

None of the cited references explicitly state the metadata includes a constraint definition for at least one column. Therefore, no combination of Tijare and Lipkin can provide the claimed limitations, and independent claims 1, 19, 20, 22, 28, and 34 are nonobvious.

No Motivation to Combine References: The Office states implicitly that one would be motivated to combine Tijare and Lipkin to "to modify the content management system of Tijare and include the constraints of Lipkin, because it would have captured necessary metadata about the objects and simplified the content store and presented to the content management system." This assertion by the Office merely restates a fact expressed by Tijare, and is not related to solving the problem expressed by the Applicant.

The use of an unsupported assertion in the Office Action with respect to combining Tijare with Lipkin does not satisfy the explicit requirements needed to demonstrate motivation as set forth by the *In re Sang Su Lee* court. Therefore, the Examiner appears to be using personal knowledge, and is respectfully requested to submit an affidavit as required by 37 C.F.R. § 1.104(d)(2).

The Examiner must avoid hindsight. M.P.E.P. § 2143.01 (citing *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984)). That is, the Examiner cannot use the Applicant's structure as a "template" and simply select elements from the references to reconstruct the claimed invention. See *In re Gorman*, 933 F.2d 982, 987, 18 U.S.P.Q.2d (BNA) 1885, 1888 (Fed. Cir. 1991). The fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01.

In this case, hindsight is required to associate the teachings of Tijare with Lipkin, because none of these references teach solving the problems presented by the Applicant. Thus, one would not be motivated to make the combination of Tijare with Lipkin.

No Reasonable Expectation of Success: Even if Lipkin's improved security system mechanism were added to the content management system of Tijare, and the combination were modified to provide the content management system of Tijare including the constraints of Lipkin, one of skill in the art would not expect the combination to provide "reading metadata for a database, metadata including a constraint definition for at least one column" and "translating the metadata into a page definition language including a translation in accordance with the constraint definition" as claimed by the Applicant in claims 1, 19, 20, 22, 28, and 34. This is because the constraints are not included in the metadata of either Lipkin or Tijare, and such a combination would fail to provide proper metadata translation.

The test for obviousness under § 103 must take into consideration the invention as a whole; that is, one must consider the particular problem solved by the combination of elements that define the invention. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985). One of ordinary skill in the art does not have a reasonable expectation of success when combining the cited reference indicates failure as part of normal operating procedure.

Therefore, since there is no evidence in the record to support disclosure by Tijare and Lipkin of "reading metadata for a database, metadata including a constraint definition for at least one column" and "translating the metadata into a page definition language including a translation in accordance with the constraint definition," since there is no motivation to supply the missing elements, and since no reasonable expectation of success arises even if the combination is made, a *prima facie* case of obviousness has not been established with respect to independent claims 19, 20, 22, 28 and 34.

Claims 2-4, 6-9, and 11-18 depend either directly or indirectly from claim 1. Claims 23-27 depend either directly or indirectly from claim 22. Claims 29-33 depend either directly or indirectly from claim 28. Claims 35-37, 39-42, and 44-49 depend either directly or indirectly from claim 34. These dependent claims inherit the elements of their respective base claims, and are therefore allowable for the same reasons as discussed above with respect to the base claims 1, 22, 28 and 34. Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 2-4, 6-9, 11-18, 23-27, 29-33, 35-37, 39-42, and 44-49.

Furthermore, claims 4, and 37 recite "reading column definitions includes reading a null allowable indicator." The Office Action, in rejecting claim 4, states "An Item is composed of one row from the database table representing the root component and zero or more rows from each of the database tables" as teaching the recited language. Applicant notes that a Null value for a column value is different from whether zero or more rows exist for a table. Further, nowhere does Tijare or Lipkin teach or disclose any specialized translations for columns that allow Null values. Because all elements of Applicants claims 4, and 37 cannot be found in Tijare and/or Lipkin and no specific reasons supporting the combination of such references has been provided, Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 4, and 37.

Claims 9, and 42 recite "translating the metadata includes translating a foreign key reference to a multi-selectable user interface element." The Office Action, in the rejection of claim 9, states that Tijare, at column 12, lines 5-30 teaches the recited language. Applicant respectfully disagrees with this interpretation of Tijare. The cited section merely states that wild cards and descendant axis notations may be used. Applicant notes that this has nothing to do with translating a foreign key reference into a user interface element having multiple selectable

items in the user interface element. Further, Applicant has reviewed Tijare and Lipkin and can find no teaching of translating metadata or foreign key references into a user interface element having multiple selectable items based on the foreign key references. Because all elements of Applicants claims 9, and 42 cannot be found in Tijare and/or Lipkin and no specific reasons supporting the combination of such references has been provided, Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 9, and 42.

Claims 11, and 44 recite that the constraints may be a validation rule and claims 12, and 45 recited that the constraints may be a database integrity rule. The Office Action states that Tijare, at column 6, lines 15-29 teaches the recited language. Applicant respectfully disagrees with this interpretation of Tijare. Neither the cited section nor Tijare and Lipkin as whole teaches or discloses constraints. Further, Tijare and Lipkin does not teach or disclose using database integrity rules or validation rules in translating metadata into a page description language. Because all elements of Applicants claims 11, 12, 44, and 45 cannot be found in Tijare and/or Lipkin and no specific reasons supporting the combination of such references has been provided, Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 11, 12, 44, and 45.

Claims 19-33 were stated in the Office Action to recite a system for carrying out the similar methods claimed in claims 1-18 and were rejected under similar rationale to claims 1-18. Applicant respectfully submits that claims 19-33 are allowable for the same reasons as discussed above with respect to claims 1-18. Applicant respectfully requests reconsideration and the withdrawal of the rejection of clams 19-33.

Further, Claim 19 recites receiving a request for a web page, translating metadata for a database into HTML for the web page, and sending the web page to the requestor. Claims 50, and 53 recite similar language. Applicant notes that Tijare is directed to providing XML that can be queried using simpler query formulations that for an underlying content management system (see Abstract). While Tijare does disclose that content can include web page content, nowhere does Tijare teach or disclose receiving a request for a web page, or translating database metadata into HTML that is supplied in response to the web page request. Because all elements of Applicants claims 19, 50, and 53 cannot be found in Tijare and/or Lipkin and no specific reasons

supporting the combination of such references has been provided, Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 19, 50, and 53.

Claim 20 recites "translating at least one constraint in the metadata into the ColdFusion scripting language." Claim 51 recites similar language. As discussed above, Tijare does not teach or suggest translating constraints in metadata. Because all elements of Applicants claims 20, and 51 cannot be found in Tijare and/or Lipkin and no specific reasons supporting the combination of such references has been provided, Applicant respectfully requests reconsideration and the withdrawal of the rejection of claims 20, and 51.

Claims 34-56 were stated in the Office Action to recite computer-readable media for carrying out the similar methods claimed in claims 1-18 and were rejected under similar rationale to claims 1-18. Applicant respectfully submits that pending claims 34-37, 39-42, and 44-56 are allowable for the same reasons as discussed above with respect to claims 1-18.

Thus the rejections of claims 1-4, 6-9, 11-37, 39-42, and 44-56 under 35 U.S.C. § 103(a) are improper. Reconsideration and withdrawal of the rejections are respectfully requested.

Reservation of Rights

In the interest of clarity and brevity, Applicant may not have addressed every assertion made in the Office Action. Applicant's silence regarding any such assertion does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of

priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (210) 308-5677 to facilitate prosecution of this Application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date April 12, 2007   By / Mark V. Muller /
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CERTIFICATE UNDER 37 CFR § 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this _12_ day of April 2007.

KATHLEEN GANNON

Name   Signature